

5. APPLICATION FOR GRANT FUNDING

Applicant Information

1. Primary Applicant (Required):

Name of principle individual: Jennie Stapp, Digital Library Director

Name of agency/entity: Montana State Library

Street: 1515 East Sixth Avenue

City: Helena

County: Lewis & Clark

State: Montana

Zip Code: 59620-1800

Contact email address: jstapp2@mt.gov

Contact fax address: 406.444.0581

Contact phone: 406.444.5356

Organizational Unit (if applicable)

Department: Montana State Digital Library

Division: Natural Resource Information System

2. Other Project Participants or Partners - please list all:

Name of contact: Lance Clampitt, USGS Geospatial Liaison

Name of Agency: United States Geologic Survey (USGS)

Street: 229 AJM Johnson Hall

City: Bozeman

County: Gallatin

State: MT

Zip Code: 59717-3492

Contact email address: lsclampitt@usgs.gov

Contact phone: 406.994.6919

3. Date Submitted (Required): 2/13/09**4. Date Received by State:****4. Descriptive Title of Applicant's Project (Required):**

MSDI Hydrography Stewardship: Training, Planning and Outreach

Project Narrative

1. Project Goals, Objectives and Risks (Required) –

MLIA FY2010 Land Plan, GOAL 1: A statewide set of MSDI framework layers that are consistently collected, accurately maintained, and made commonly available.

Objective 1.1 – Funding and administrative support for local, tribal, state and federal data collection efforts that will help develop and maintain multi-jurisdictional MSDI framework layers.

Hydrography is one of the seven national geospatial framework data layers and is one the thirteen Montana Spatial Data Infrastructure (MSDI) framework layers. The National Hydrography Dataset (NHD) is a comprehensive set of spatial data that contains information about surface water features such as lakes, ponds, streams, rivers and springs. In the NHD, surface water features are combined to form "reaches," providing a framework for linking water-related data to a surface water drainage network.

The Montana Natural Resource Information System program (NRIS) is the official steward for Montana's Hydrography data at both the federal and state levels. NRIS carries out stewardship responsibilities in consultation with the United States Geological Survey (USGS) and the Montana Hydrography Working Group (Working Group).

A high resolution, 1:24,000 NHD was developed by the USGS in 2005-2006. This data is considered the national standard for Hydrography but is not used widely in Montana. The high resolution data offers many advantages over previously available data and NRIS staff has, over the last year with support from USGS and MLIAC, revised nearly 98 hydrologic units (HUCs).

To date few Montana users have adopted the high resolution NHD because the data model is unfamiliar and the initial dataset was rife with topology and network errors. NRIS staff recently completed a year and a half long project to correct many of the errors in the 1:24,000 data so users will know find it much more accurate. As the NHD steward, in partnership with the USGS, and in support of the MLIA Land Plan FY2010 Goal 1.1, NRIS needs to continue to provide an ongoing program of framework development planning, training, outreach, maintenance and distribution of the high resolution NHD.

2. Technical Approach (Required) - *Provide a written project plan along with hardware, software and staffing solutions if applicable. Please include (in order):*

a. Scope of Work

To ensure that the NHD is consistently collected, accurately maintained, and made commonly available NRIS will evaluate and update the MSDI theme stewardship plan for Hydrography. The updated plan will reflect the improvements made to date on the Montana high resolution NHD and will explore opportunities for future development of the Montana NHD through the inclusion of data maintained by current and potential users

such as the Montana Natural Heritage Program (MTNHP) and the Montana Department of Transportation (MDT).

To inform the planning process and to further engage users of the NHD, NRIS will hold a minimum of two Working Group meetings as well as a series of meetings with individual agencies including but not limited to the MTNHP, MDT, NRCS, the US Forest Service and FWP.

NRIS will also sponsor a minimum of two workshops to demonstrate the value of the NHD and to train users on the tools required to edit the Montana NHD. Opportunities exist for sessions at the MAGIP spring and fall technical sessions as well as the 2010 Intermountain GIS Conference.

Finally, NRIS will purchase and provide access to a minimum of two roving Arc Editor licenses. This software is necessary to edit the NHD. Agencies and organizations that do not have regular need for this software may find it cost prohibitive to purchase the software for limited agency use. NRIS will make the licenses available to requestors for a limited period of time to provide their staff the resources they need to support the on-going maintenance of the MT NHD.

b. Deliverables –

- 1) An updated MSDI theme stewardship plan for Hydrography that is approved by the Working Group.
- 2) Two available Arc Editor licenses that are made freely available to for use by NHD users who are staff of Montana agencies at the federal, state, local and tribal levels.
- 3) A minimum of two Working Group meetings in Montana.
- 4) A minimum of two training workshops on the NHD in Montana.

c. Acceptance Criteria (how can the Department judge whether the deliverables are complete and meet the project objectives and comply with the scope of work)

- 1) The updated plan will be shared with the MLIAC council as part of the MLIA FY2011 Land Plan report.
- 2) Two licenses will be available for use upon request by NHD users as described above.
- 3) Meeting minutes from Working Group meetings will be made available online via the Montana NHD framework layer web page: <http://nris.mt.gov/nsdi/nhd/>.
- 4) NHD workshops will be open to all NHD users in Montana and will be promoted on the Montana Association of Geographic Information Professionals listserv. Workshop materials will also be available from the NHD framework layer web page.

d. Timeline of project - Please submit on a separate page

See Attachment A

e. Staff roles and responsibilities (grantee) -

Evan Hammer is the Principle Investigator for this project and will perform project management, coordination, and will lead the MT NHD planning process. Evan has a Masters in Geography and has worked professionally in the GIS arena for 12 years.

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Duane Lund is the GIS specialist assigned to this project and will perform data maintenance, editing, quality assurance and user support. Duane has worked extensively with Montana's NHD for the past 10 years. He has a degree in geology and over seventeen years experience as a GIS expert and cartographer at NRIS.

3. Geography Affected (Required) –

The NHD provides a common framework for mapping surface water features across all public and private lands and all political jurisdictions in the United States. Our project area includes the entire state of Montana as well as certain watersheds that overlap Montana's borders. The NHD is organized by fourth code hydrologic unit codes, or HUCs. Under an agreement with USGS, Montana NRIS is responsible for the 98 HUCs that fall entirely within Montana's borders or cross the Montana boundary, except for 17010104 and 17010105 in the northwest corner of the state.

The NHD Working Group for Montana is open to NHD users from any Montana political jurisdiction. Active members of the working group represent NRIS, the USGS, the US Forest Service, and Montana Fish, Wildlife and Parks. Training on, maintenance of and collaboration on this dataset will ensure that these agencies and all Montana jurisdictions have access to complete and accurate hydrography data for Montana.

4a. Detailed Budget (Required) - *Please provide a short written budget summary along with the table. If this is a multi-year request please copy the table below and label each table by fiscal year – FY2010, FY2011, etc*

Category	Applicant Share (including in-kind)	MLIA Share	Other Share	Total
a. Personnel	\$4450.56			
b. Fringe Benefits	\$1356.77			
c. Travel		\$2000		
d. Equipment		\$2500		
e. Supplies				
f. Contractual		\$3000		
g. Other				
Totals	\$5807.33	\$7500		

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4b. Provide a separate budget summary for each participant (including subcontracts)

Category	Applicant (MSL)	1 st Partner (USGS)	2 nd Partner	Total
a. Personnel	\$3730.56	\$720.00		\$4450.56
b. Fringe Benefits	\$1119.17	\$237.60		\$1356.77
c. Travel				
d. Equipment				
e. Supplies				
f. Contractual				
g. Other				
Totals	\$4849.73	\$957.60		\$5807.33

5. Statements of support must be included from any party listed as a partner. Other statements of support will not be evaluated and should not be submitted (not counted toward 5 page limit). Included.

6. Renewable Grant Accountability Report:

If you received a 2009 MLIA Grant you must file a report documenting the progress you have made toward meeting the requirements of that grant (not counted toward the 5 page limit). See Attachment B.

7. Authorized Signature

Authorizing Statement

I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.

I further certify that this project will comply with applicable statutory and regulatory standards.

I further certify that I am (we are) authorized to enter into a binding agreement with the Montana Department of Administration to obtain a grant if this application receives approval.

Jennie Stapp

Date: February 13, 2009

Signature and Title of Authorized Representative(s) of Public Entity Applicant

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Attachment A

Project Timeline

Deliverable	Due no later than:
Summer meeting of the NHD Working Group	July 30, 2009
Two Arc Editor licenses will be purchased and made available for use upon request by NHD users as described above.	July 30, 2009
An updated MSDI theme stewardship plan for Hydrography that is approved by the Working Group	September 30, 2009
Fall training or workshop	October 31, 2009
Winter meeting of the NHD Working Group	January 30, 2010
Spring training or workshop	April 30, 2009

Attachment B

2009 MLIA Grant progress report

Deliverables:

- 1) An active Hydrography Working Group

The NHD Working Group met most recently in January to discuss the progress made on the improvements to the 1:24000 resolution NHD and how to approach using and contributing edits to the NHD.
- 2) A web page for reporting Hydrography efforts
 - A web page for the Montana NHD is available here: <http://nris.mt.gov/nsdi/nhd/>. This page includes links to downloadable NHD data. Improving this page is a goal of NRIS before the end of the 2009 grant cycle.
- 3) Presentations and trainings for GIS professionals, planners, researchers, policymakers and private sector users
 - NRIS staff participated in the Hydrography Round Table Northwest GIS Users Conference in Sun Valley Idaho in October, 2008.
 - NRIS staff is also planning a ½ day workshop on the use of the NHD at the MAGIP spring meeting in Miles City in March
- 4) A workflow for submitting changes that is satisfactory to Montana users
 - Completed
- 5) FY 2008 Data Distribution
 - a. State plane versions of the data, updated quarterly, available from the Montana Geographic Information Clearinghouse
 - Complete and ongoing
 - b. UTM version of the data, updated weekly, available from the USGS' National Hydrography Viewer.
 - This is no longer considered a priority for the Working Group
 - c. Metadata registered with relevant GIS portals.
 - Metadata is up-to-date and made available for portal harvesting. Metadata is also available through the Montana GIS Portal: <http://gisportal.mt.gov>
- 6) FY 2009 Data Distribution
 - d. Following the Minnesota stewardship model, an SDE database at NRIS that mirrors the national database.
 - To be completed by June 30, 2009

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- e. Interactive website allowing the user to identify HUCS for “clip and ship” geodatabase downloads.
 - Available at the subregion level:
<http://nris.mt.gov/nsdi/nhd/hiresgeo.asp>.
- f. Web feature service to support federated access
 - To be completed by June 30, 2009

Deliverables associated with MSDI theme plan goal 5:

- 1) At least 50 HUCS corrected for topology and network errors in FY 2008
 - Completed
- 2) Remaining HUCS corrected for topology and network errors in FY 2009
 - Five remaining HUCS will be completed by June 30, 2009, see the following map for details.